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EXAMINER

NGUYEN, PHILLIP H

ART UNIT	PAPER NUMBER
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2191

NOTIFICATION DATE	DELIVERY MODE
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10/10/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/827,528	Applicant(s) SANYAL ET AL.	
	Examiner Phillip H. Nguyen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed 6/10/2008.
2. Claims 1-4, 6-14 and 16-23 remain pending in this application, with claims 1 and 11 amended, and claims 5 and 15 cancelled.

Response to Amendment

3. Prior objection to the specification under 35 USC 132(a) is hereby maintained because the argument is not deemed persuasive and no amendments were made to the claims.
4. Prior rejection to claims 21-23 under 35 USC 112, first paragraph is hereby maintained because the argument is not deemed persuasive and no amendments were made.
5. Prior rejection to claims 8 and 18 under 35 USC 112, second paragraph is hereby withdrawn in view of applicant's amendments.
6. Prior rejection to claims 11-23 under 35 USC 101 is hereby maintained because no amendments were made and applicant's argument is not deemed persuasive.

Response to Arguments

7. Applicant's arguments filed 6/10/2008 have been fully considered but they are not deemed persuasive.

Applicant asserts on page 6-7 of the amendment regarding the objection under 132(a) that the new matter rejection is totally untenable.

Applicant goes on to state:

"Where else are computer programs stored or even exist for the purposes of being run? Is it not well known that programs are stored in some form of memory for running in a processor? What else would one of skill in the art expect to be capable of storing a program of the disclosed nature?"

"A patent need not teach, and preferably omits, what is well known in the art." *Spectra-Physics, Inc v. Coherent, Inc.*, 827 F.2d 1524, 3 USPQ 1737 (Fed. Cir. 1987)." M.P.E.P. § 2164.01.

"Every word in a claim need not be found per se in the specification, New matter may be broadly defined as disclosure material not already explicitly, implicitly, inherently or intrinsically included in an application as of its effective filing date. Added matter in an application is not legally prohibited by statute as new matter when it merely makes explicit that which was originally implicit, inherent or intrinsic in the original disclosure. New matter may take the form of additions, deletions or modifications, subsequent to the initial filing of an application, to any part of the disclosure which includes the drawing, specification and claims. Matter may not be added to an application for the purpose of supplementing an otherwise inadequate disclosure of the invention in order to provide sufficient support for the claims. Any claim which requires new matter for

Art Unit: 2191

its support is invalid. Added matter upon which no claim depends for support may have to be cancelled if objected to -by the Examiner as new matter but otherwise imposes no legal liability even if actually entered in the application. See generally, *In re Davies*, 475 F.2d 667, 177 U.S.P.Q. 381 (C.C.P.A. 1973), and *Rhone--Poulenc v. Dann*, 504 F.2d 983, 184 U.S.P.Q. 196. (4th Cir. 1974).

“Attention is called to the fact that the specification on page 5 first two full paragraphs disclose processors, hardware/architecture. This is sufficient to indicate the presence of a memory in which the program could be/would be stored.”

Examiner respectfully disagrees with all the allegations as argued by the applicant.

There should be clear support or antecedent basis in the specification for the terminology used in the claims. Usually, the original claims follow the nomenclature of the specification; but sometimes in amending the claims or in adding new claims, applicant employs terms that do not appear in the specification. This may result in uncertainty as to the interpretation to be given such terms. **See MPEP § 608.01(o).**

The claim or claims must conform to the invention as set forth in the remainder of the specification and **the terms and phrases used in the claims must find clear support or antecedent basis in the description** so that the meaning of the terms in

Art Unit: 2191

the claims may be ascertainable by reference to the description. **See MPEP 608.01(i) [R-3].**

Thus, the computer-readable medium is a new matter and was not described in the original specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention.

Applicant further asserts on page 7 of the amendment regarding 101 rejection to claims 11-23 that the apparatus "could be" or "might be" hardware. Applicant further states that "patent applications are not written for those in primary school but those of skill in the related art – see MPEP 2164.05(b) and comments re this issue supra."

Examiner respectfully disagrees with all the allegations as argued by the applicant.

The specification is a written description of the invention and of the manner and process of making and using the same. **The specification must be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention pertains to make and use the same. See MPEP 608.01 [R-5] Specification.**

According to the MPEP, whether the patent application is written for those in primary school or for those of skilled in the art, **it MUST be written in such full, clear,**

Art Unit: 2191

concise, and exact terms as to enable any person skilled in the art or science to which the invention pertains to make and use the same.

When the language of the claim raises a question or doubt as to whether the feature introduced by such language is unclear or indefinite, the examiner MUST raise a question (e.g., objection or rejection) and asks the applicant to clarify. In this case, claim 11 recites an apparatus but all the components make up this apparatus are software. If the components make up the apparatus are software, the apparatus itself is software. Again, applicant is suggested to add at least one hardware component to the apparatus to overcome the rejection.

Applicant asserts on pages 8-9 of the amendment that a prima facie case of obviousness has not been established, and that the rejection should be withdrawn. Applicant goes on stated the reason of combine the references and motivation was improper.

Examiner respectfully disagrees with all the allegations as argued.

The Supreme Court reaffirmed *Graham v. John Deere Co.* as the controlling case on the topic of obviousness. The Supreme Court stated that the Federal Circuit erred when it applied the well-known teaching-suggestion-motivation (TSM) test in an overly rigid and formalistic way.

“Specifically, the Supreme Court stated that the Federal Circuit had erred in four ways: (1) “by holding that courts and patent examiners should look only to the problem

Art Unit: 2191

the patentee was trying to solve ” (Id. at ____, 82 USPQ2d at 1397); (2) by assuming “that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem” (Id.); (3) by concluding “that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try” (Id.); and (4) by overemphasizing “the risk of courts and patent examiners falling prey to hindsight bias” and as a result applying “rigid preventative rules that deny fact finders recourse to common sense.” *KSR*, 82 USPQ2d at 1397.

Under the TSM test, a claimed invention is obvious when there is a teaching, suggestion, or motivation to combine prior art teaching. The teaching, suggestion, or motivation may be found in the prior art, in the nature of the problem, or in the knowledge of a person having ordinary skill in the art.

According to the Supreme Court, the TSM test is one of a number of valid rationales that could be used to determine obviousness. It is NOT the only rationale that may be relied upon to support a conclusion of obviousness.

In this case, both Hellman and Sandham are in the same field of endeavor, which is data transformation.

Hellman's approach is to derive a transformation routine to transform data from one data schema to another. However, Hellman does not explicitly teach the mapping accounts for differences in endianness between the source and target schema.

Sandham's approach is transforming data in a first endian format into an address in a second endian format (see at least col. 2:37-44).

Thus, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to recognize that transforming data from one endian format to another is well known in the art and would modify Hellman to include the teaching of Sandham. The modification would have been obvious because it would allow the target schema to be processed on a different type of processors.

Once again, the motivation of combining the references does not need to be addressed in either of the references.

Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 211 [R-1] Interpretation of Claims- Broadest Reasonable Interpretation. During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification.

Applicants always have the opportunity to amend the claims during the prosecution and broad interpretation by the examiner reduces the possibility that the claims, once issued, will be interpreted more broadly than is justified. See *In re Prater*, 162 USPQ 541, 550-51 (CCPA 1969).

Specification

8. The amendment filed 10/10/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "a computer

Art Unit: 2191

readable medium” is considered as new matter because it was not supported or described in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- Regarding claim 21 has been amended to recites a computer readable medium. This newly added material is not supported or described in the original specification. For examining purposes, examiner interprets claim 21 as a computer program claims. Claims 22-23 suffer the same rejection since they depend on claim 21.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- Regarding claim 11 recites a computer apparatus including a binary translator but it appears reasonable to interpret this computer apparatus by one of ordinary skill in the art as software, per se. Applicant's specification provides no explicit and deliberate definition of the binary translator or other software components such as "binary translator", "a source model", "a target model", "a mapping", and "a routine generator" that make up the computer apparatus other than they could be software components, which are directed to functional descriptive material, per se, and therefore non-statutory. Claims 12-20 directly or indirectly depend on claim 11 and therefore suffer the same rejection
- Regarding claim 21 recite a computer program embedded in a computer readable medium but a computer readable medium is a new matter that has not been described in the original specification. Examiner interprets this claim as a computer program. Therefore, claim 21 is directed to software per se. Claims 22-23 directly depend on claim 21 and therefore suffer the same rejection.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2191

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-4, 6-14 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellman et al. (United States Patent Application Publication No. US 2004/0216030), in view of Sandham (United States Patent No. US 7,203,636).

As per claims 1, 11 and 21:

Hellman discloses:

generating a source model of a source format element (see at least **FIG. 1 and FIG. 11F**; also see at least paragraph [0100] "**a source data schema and a target data schema are imported**");

generating a target model of a target format element (see at least **FIG. 1 and FIG. 11F**; also see at least paragraph [0100] "**a source data schema and a target data schema are imported**");

generating a mapping between said source model and said target model (see at least **FIG. 1 and FIG. 11I-11O**; also see at least paragraph [0103] "**the source and target data schema are mapped into the common ontology model, and mappings therefor are generated**"; also see paragraph [0106] "**The source and target data schema and the common ontology model are used by a mapping processor 230 to generate respective source and target mappings, for mapping the source data schema into the common model and for mapping the target data schema into the common ontology model**");

generating a transformation routine based on said mapping for extracting data from said source element and depositing said data in said target element (see at least **FIG. 1 and FIG. 11P**; also see at least paragraph [0103] “**a transformation is derived for transforming data conforming with the source data schema into data conforming with the target data schema, based on the mappings derived**”).

Hellman does not explicitly disclose:

wherein the mapping accounts for differences in endianness between the source and target models.

However, Sandham discloses

wherein the mapping accounts for differences in endianness between the source and target models (see at least col. 2, lines 37-40 “**endian transformation system for transforming an address location of a code represented in a first endian format into an address in a second endian format, the transformation comprising introducing an offset into the address, the size of the offset being determined from the difference between the address location of the code and a predefined address location**”).

Art Unit: 2191

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to recognize that endian transformation is well known in the art. One would have been motivated to modify Hellman's approach to include the teaching of endian transformation as disclosed in Sandham's approach to transform source data schema to target data schema to allow the target data schema to be processed on a different type of processors.

As per claims 2 and 12:

Hellman further discloses:

a mapping generated between the source model and said plurality of target models (see at least paragraph [0336 – 0410] “***A Twelfth Example - A Twenty-Third Example***”).

As per claims 3 and 13:

Hellman further discloses:

in which source models are generated for a plurality of source elements and a mapping generated between said plurality of source models and said target model (see at least paragraph [0336 – 0410] “***A Twelfth Example - A Twenty-Third Example***”).

As per claims 4 and 14:

Hellman further discloses:

Art Unit: 2191

in which said transformation routine is arranged to transform data in software code instructions from a source format code to a target format code and said routines are generated in said target format code (see at least **FIG. 11F-11P**).

As per claims 6, 16 and 23:

Hellman further discloses:

in which the transformation routine is executed at the runtime of a program in said source code (see at least **FIG. 11P**; also see at least paragraph [0145] "**to derive executable code that transforms source XML document into the target XML documents**").

As per claims 7 and 17:

Sandham further discloses:

in which said target and source models relate bit positions to variable names for any give instruction (see at least col. 2, lines 41-44 "**the transformation comprising introducing an offset into the address, the size of the offset being determined from the difference between the address location of the code and a predefined address location**").

As per claims 8 and 18:

Hellman further discloses:

Art Unit: 2191

in which a group of source models and target models are provided wherein one or more models are applied to a plurality of respective source or target instructions (see at least **FIG. 11F**).

As per claims 9 and 19:

Hellman further discloses:

in which said transformation routine is associated with a template providing a set of target format instructions semantically equivalent to said identified source instruction (see at least **FIG. 11P**).

As per claims 10 and 20:

Hellman further discloses:

in which the transformation routine is arranged to transform data from a database between a source database format to a target database format (see at least paragraph [0122] “**to derive executable code that transforms source relational databases into the target relational databases**”).

As per claim 22:

Hellman further discloses:

in which said transformation routines are implemented as routines in said computer program (see at least **FIG. 11P**; also see at least paragraph [0122] “**to**

derive executable code that transforms source relational databases into the target relational databases").

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2191

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN

10/3/2008

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191